

S
346.0469162
N7mgs
2002



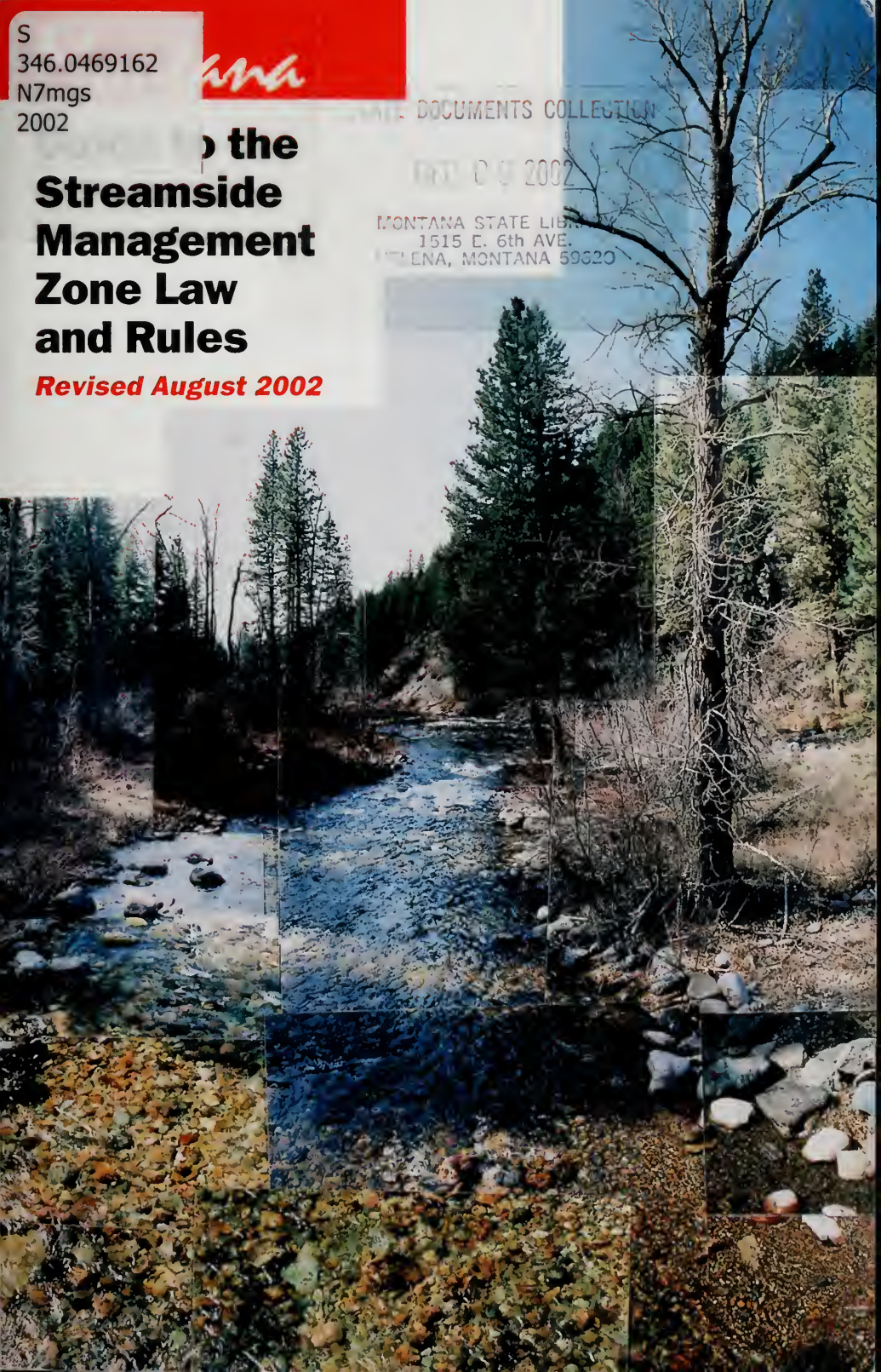
to the
**Streamside
Management
Zone Law
and Rules**

Revised August 2002

DOCUMENTS COLLECTION

EXT. D. 2002

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620



Contents

Montana is a state blessed with an abundance of natural resources.

Its forest lands supply the state with beauty and act as a collector, filter, and distributor of clean water on which plants, animals, and humans depend.

A streamside management zone, or "SMZ," is a buffer strip that serves as a natural filter which helps to keep sediment out of the stream.

Improper timber harvesting in the SMZ can cause erosion and water quality problems.

With this in mind, the 1991 Montana Legislature passed the Streamside Management Zone Law. The law also mandated the development of administrative rules, which became effective March 15, 1993.*

	Introduction	1
	Definitions	2
	Stream Classification	3
	SMZ Widths	4
	Broadcast (Slash) Burning	8
	Operation of Equipment	9
	Clearcutting and Retention Trees in the SMZ	12
	Road Construction	16
	Hazardous or Toxic Materials	18
	Side-Casting of Road Material	18
	Depositing Slash	19
	Alternative Practices	19
	Voluntary Wildlife Guidelines	20
	SMZ Field Guide	21
	SMZ Rules	23

Symbols used in this booklet

- < means less than
- ≤ means less than or equal to
- > means greater than
- ≥ means greater than or equal to

* This booklet addresses only the Montana SMZ law and rules. Other federal, state, or local laws may apply to your operation.

Guide to the Streamside Management Zone Law and Rules

Introduction

Implementation of the Streamside Management Zone (SMZ) law and rules protects and maintains the functions of a SMZ. The six functions of a SMZ, as identified in the SMZ law (77-5-301[1] MCA), are:

1. Acts as an effective sediment filter to maintain water quality
2. Provides shade to regulate stream temperature
3. Supports diverse and productive aquatic and terrestrial riparian habitats
4. Protects the stream channel and banks
5. Provides large, woody debris that is eventually recruited into a stream to maintain riffles, pools, and other elements of channel structure
6. Promotes floodplain stability

It is the responsibility of the landowner to comply with the SMZ law unless that responsibility has been transferred through a written contract.

The law prohibits seven forest practices in SMZs.

1. Broadcast burning
2. The operation of wheeled or tracked vehicles except on established roads
3. The forest practice of clearcutting
4. The construction of roads except when necessary to cross a stream or wetland
5. The handling, storage, application, or disposal of hazardous or toxic materials in a manner that pollutes streams, lakes, or wetlands, or that may cause damage or injury to humans, land, animals, or plants
6. The side-casting of road material into a stream, lake, wetland, or watercourse
7. The deposit of slash in streams, lakes, or other water bodies

NOTE: The SMZ law does not apply to cutting wood for personal use or to other land management activities that do not qualify as timber sales.

Definitions

For the full text of SMZ rules and definitions, see pages 23-32. Unless surrounded by quotes, these definitions are paraphrased.

Bench: An area where a steep slope greater than 35% levels off to a gentle slope of 15% or less for a width of 30 feet or more.

Diameter at breast height (DBH): The length of a cord through the center of a tree trunk measured at a point 4 1/2 feet off the ground on the uphill side of the tree.

Established road: An existing road that a highway vehicle can safely operate on without doing any work except:

- clearing vegetation
- removing any access barriers
- replacing any stream crossing or drainage structures that were removed to restrict access
- grading the road surface

Hazardous or toxic materials:

Substances that by their nature are dangerous to handle or dispose of; a potential environmental contaminant, including petroleum products, pesticides, herbicides, chemicals, and biological wastes.

Lake: "... a body of water where the surface water is retained by either natural or artificial means, where the natural flow of water is substantially impeded, and which supports fish."

Other bodies of water (OBW):

Irrigation and drainage systems, including canals, that discharge directly into a stream, lake, or other surface water. Ponds and reservoirs >1/10 of an acre that do not support fish also fall

into this category. "Water bodies used solely for treating, transporting, or impounding pollutants shall not be considered surface water." OBW are treated as Class 3 Streams.

Ordinary high water mark (OHWM):

The location on a stream bank, lakeshore, or OBW where the water level normally reaches during peak flow.

Salvage: The harvest of trees that have been killed, damaged, or are in imminent danger of being killed or damaged by injurious agents other than competition between trees.

Streamside management zone (SMZ):

A zone of variable width along each side of the stream, lake, or other body of water.

SMZ slope: A distance measured from OHWM to a point 50 feet away and perpendicular to the stream.

Stream: "A natural watercourse of perceptible extent that has a generally sandy or rocky bottom or definite banks and that confines and conducts continuously or intermittently flowing water." DNRC interprets "perceptible extent" to mean that at least 50% (50 feet or more) of a 100-foot segment meets the definition of a stream. It does not have to be continuous.

Timber sale: "A series of forest practices designed to access, harvest, or regenerate trees on a defined land area for commercial purposes."

Toe of fill: The downhill edge of the road fill.

Wetlands: Areas that remain wet long enough to support a prevalence of plants that need saturated soil conditions. Wetlands include marshes, swamps, bogs, and similar areas.

Stream Classification

The SMZ law and rules apply only to drainages that meet the definition of a stream, lake, or OBW.

Streams are classified in segments.

Variable conditions can cause a stream to be made up of any combination of stream segment classes.

Class 1 stream segments

There are two ways to determine a Class 1 stream:

1. The stream supports fish, or
2. The stream normally flows during six months of the year or more and contributes surface flow to another stream, lake, or OBW. **NOTE:** A Class 1 stream under this definition may be dry up to six months of the year.

Class 2 stream segments

By definition, they are streams that do not qualify as Class 1 or as Class 3.

Two examples of Class 2 streams are:

1. Stream segments that **do not** support fish, and normally **do not** have surface flow six months of the year or more, but **do** contribute surface flow to another stream, lake, or OBW.
2. Stream segments that **do not** support fish, and normally **do** have surface flow six months of the year or more, but **do not** contribute surface flow to another stream, lake, or OBW.

Class 3 stream segments

They contain no fish, rarely contribute surface flow to other streams or OBW, and normally do not have surface flow six months of the year or more. Class 3 streams segments are typically not connected to other streams.

NOTE: If you are uncertain as to the classification of your stream, please call your local service forester for assistance.

SMZ Widths

BASIC SMZ WIDTHS

SMZ widths are directly dependent on SMZ-slope and stream class.

Class 1 and 2 streams and lakes:

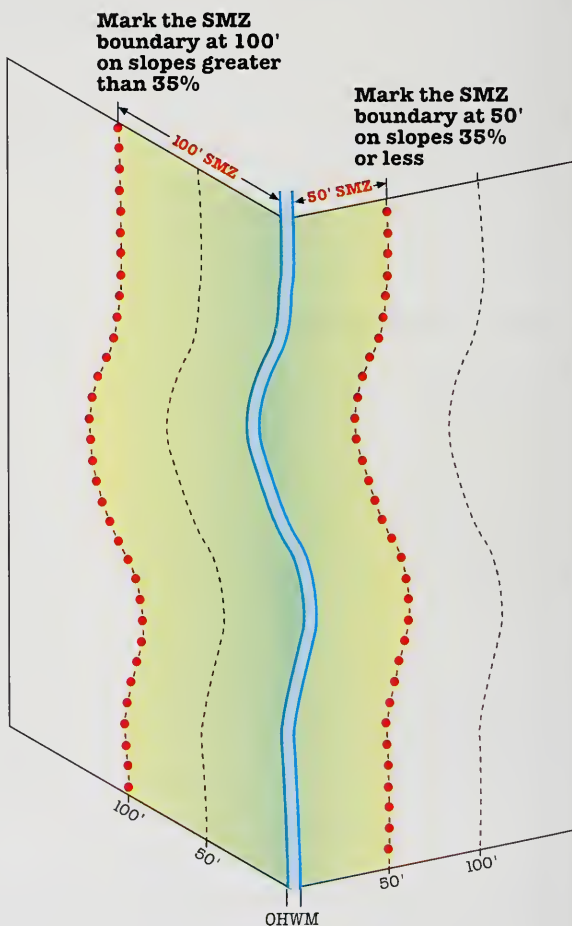
- On SMZ slopes less than or equal to 35%, the SMZ boundary is 50 feet (slope distance*) from OHWM.
- On SMZ slopes greater than 35%, the SMZ boundary is 100 feet (slope distance) from OHWM.

Class 3 streams and OBW:

- The SMZ boundary is 50 feet regardless of the SMZ slope.

SMZ Widths for Different Slopes

Class 1 and 2 streams



* **Slope distance** means the length of a line between two points on the land surface.

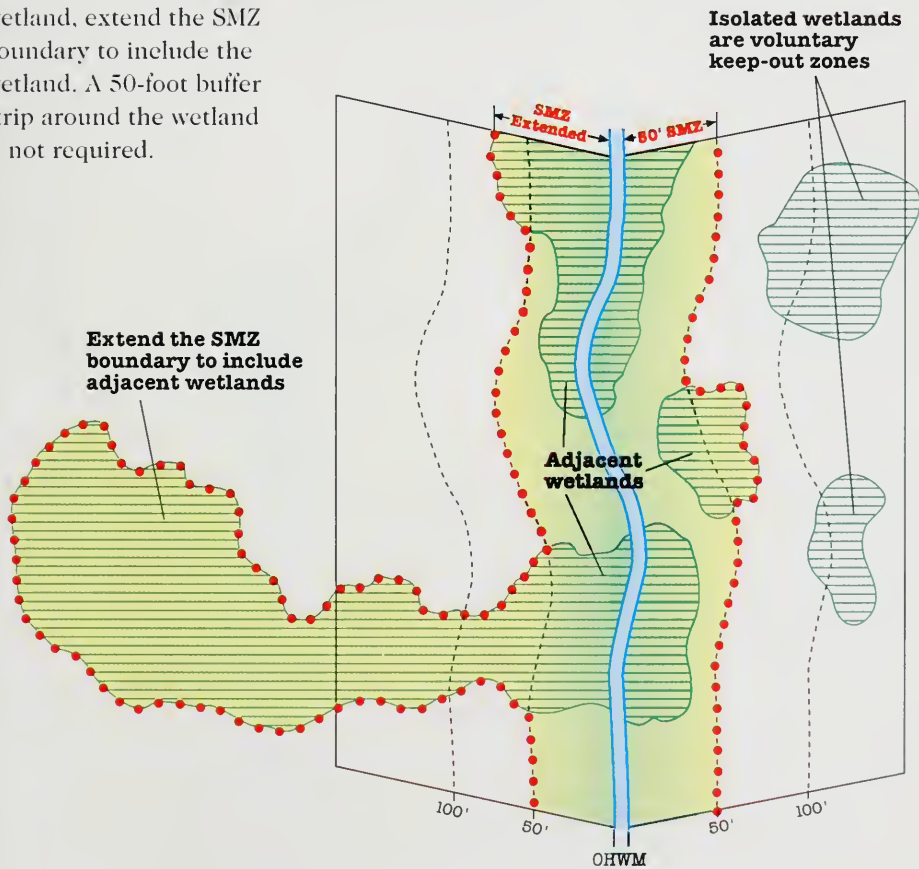
SMZ Widths, continued

SMZ WIDTHS FOR ADJACENT WETLANDS

Where the normal SMZ boundary (either 50 feet or 100 feet) intercepts a wetland, extend the SMZ boundary to include the wetland. A 50-foot buffer strip around the wetland is not required.

SMZ Widths for Wetlands

Class 1, 2, and 3 streams and lakes



SMZ Widths, continued

EXCEPTIONS TO BASIC SMZ WIDTHS

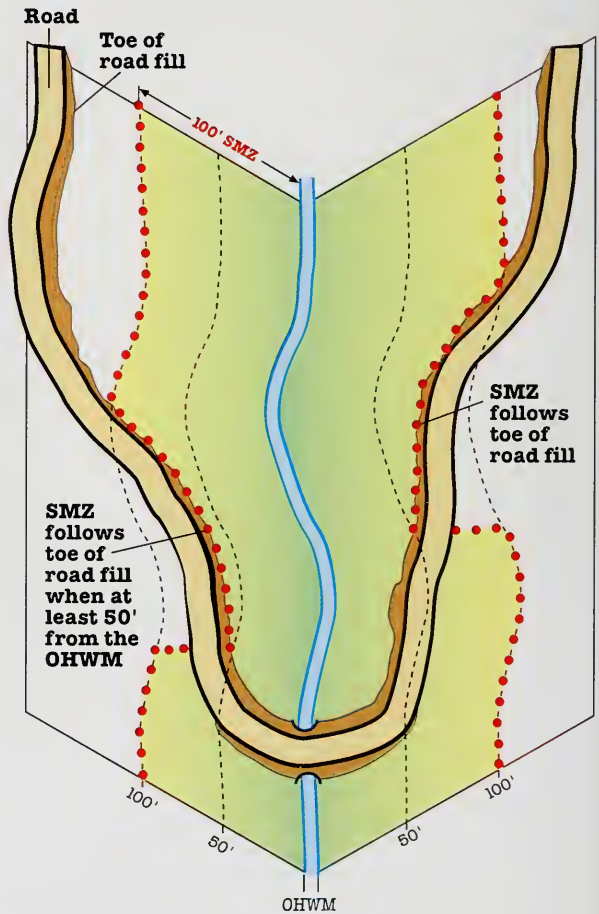
There are two exceptions to the 100-foot SMZs.

1. Road exception to 100-foot SMZs

- When an established road exists between 50 and 100 feet from OHWM, the SMZ boundary shifts to follow the toe of the fill.
- Otherwise, the SMZ boundary remains at 100 feet from OHWM.

SMZ Widths for Established Roads

**Class 1 and 2 streams,
SMZ slopes greater than 35%**

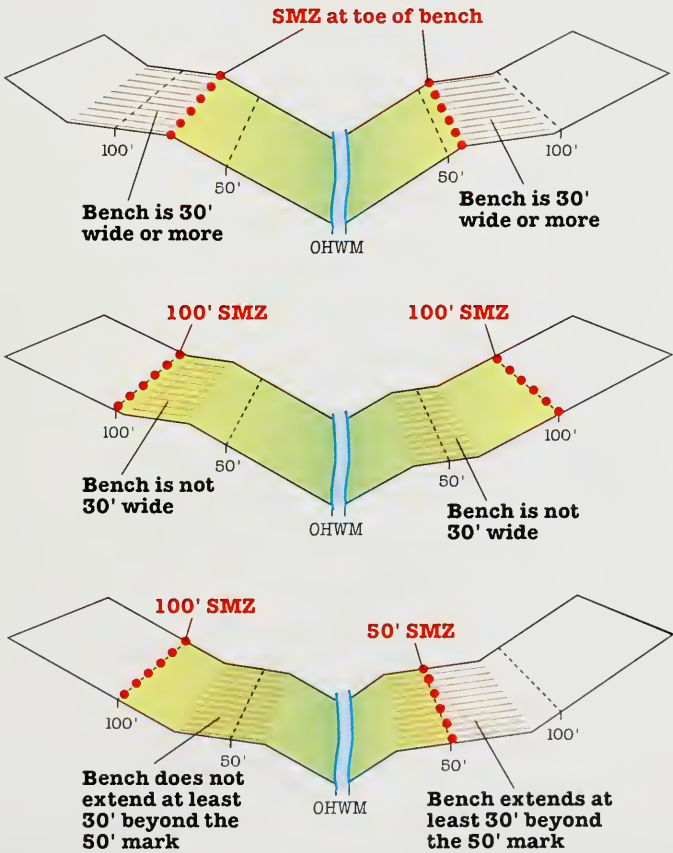


2. Bench exception to 100-foot SMZs

- If the ground slope within the 100-foot SMZ decreases to 15% or less for a width of 30 feet or more to form a bench, then the SMZ boundary is the edge of the bench nearest the stream when the edge of the bench is between 50 and 100 feet.
- If the bench begins within 50 feet of OHWM and 30 feet or more of the bench extends beyond the first 50 feet, then the SMZ boundary is 50 feet.
- In no case is the SMZ boundary ever closer than 50 feet.

SMZ Widths for Benches

Class 1 and 2 streams,
SMZ slopes greater than 35%



SMZ Widths, continued
**SMZ BOUNDARY
MARKING**

SMZ boundaries must be clearly marked on Class 1 and Class 2 stream segments when forest practices that are prohibited within the SMZ will be conducted next to the SMZ.

An example would be tractor skidding that is taking place in a cutting unit with a SMZ. Mark the boundary to prevent equipment from entering the SMZ.

“Clearly marked” means marked with paint, ribbon, or similar means so that an equipment operator can easily see from one mark to the next, even under winter conditions.

This requirement is intended to prevent accidental violations.

DNRC recommends that SMZ boundaries on Class 3 stream segments be marked.

NOTE: Use the SMZ Field Guide on pages 21-22 to help determine the SMZ boundary.

Broadcast (Slash) Burning

Broadcast burning is prohibited in the SMZ.

Some common alternatives to broadcast burning are to:

- Remove the slash
- Lop and scatter the slash
- Hand pile and burn the slash piles in the SMZ in accordance with the Montana Hazard Reduction Law

NOTE: This rule does not apply to wildfire or burns where forest products are not being harvested.

Operation of Equipment

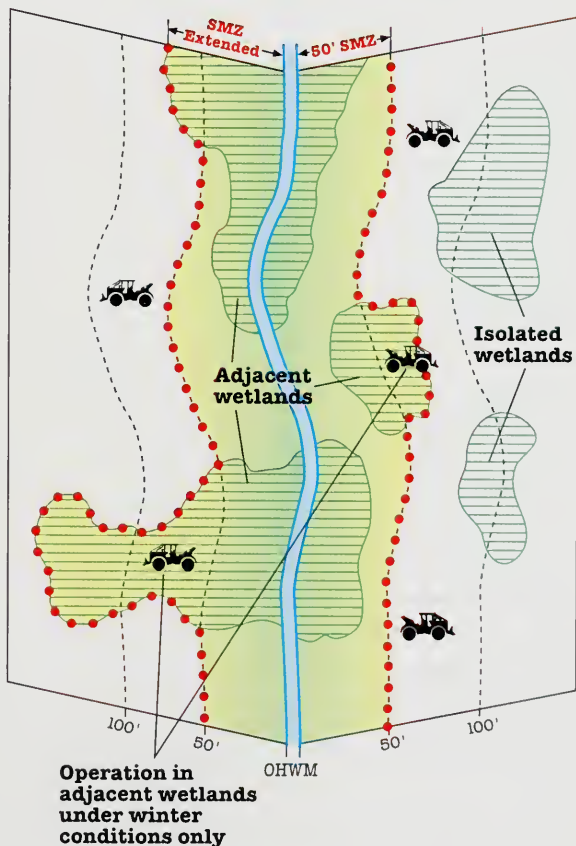
Equipment operation is prohibited in the SMZ with three exceptions.

1. Exception for equipment operation in adjacent wetlands*

ONLY UNDER ALL OF THE FOLLOWING CONDITIONS can equipment operate in the SMZ:

- The ground is frozen, or there is adequate snow.
- The equipment does not come within 50 feet of OHWM or 100 feet when extended for slope.
- The equipment does not rut or move any soil.
- Stumps are not removed.
- Shrubs and sub-merchantable trees are protected.
- The integrity of the SMZ is conserved.

Equipment Operation in Adjacent Wetlands



* This booklet addresses only the Montana SMZ law. Other federal, state, or local laws may apply to your operation.

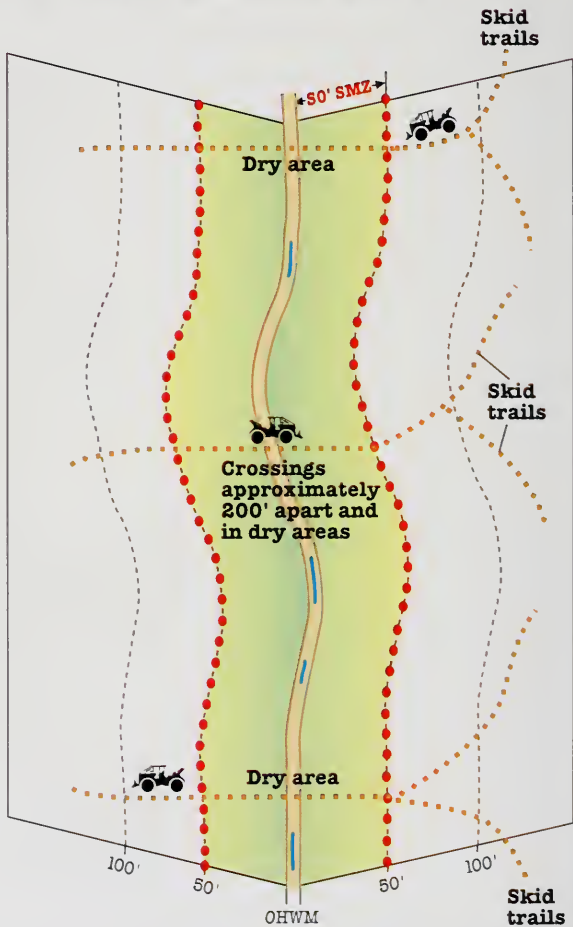
Operation of Equipment, continued

2. Exception for equipment operation on Class 3 stream segments and OBW

In order to minimize road construction and skid trails, an equipment operator may cross the SMZ and the stream on Class 3 stream segments when:

- Crossings are located approximately 200 feet or more apart, and in dry areas with stable banks and bottoms.
- Excavation is minimized.
- The distance traveled through the SMZ is minimized.
- Crossings occur only during periods when the stream is dry.
- The capacity of the stream channel or OBW is maintained.

Equipment Operation across Class 3 Streams and other bodies of water



3. Exception for equipment operation on established roads

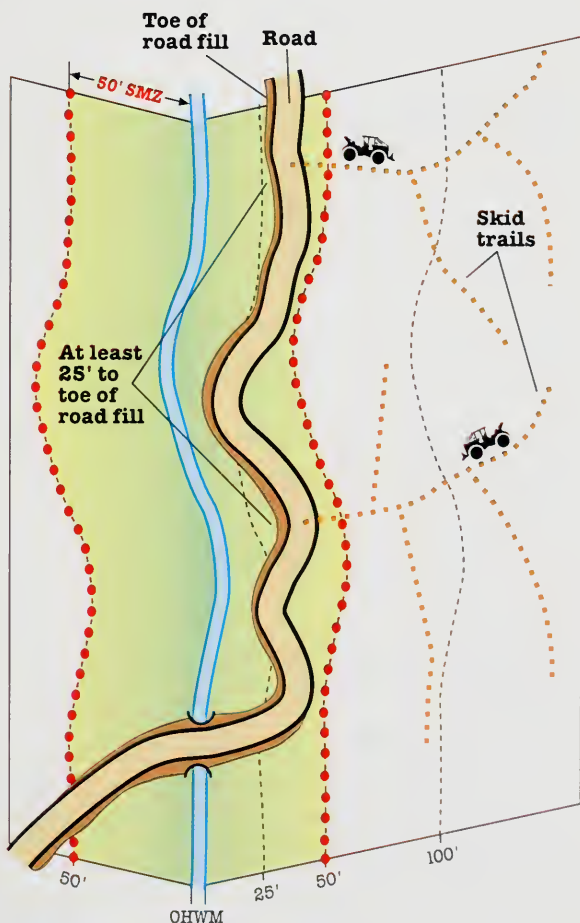
In order to minimize road construction and skid trails on stream segments, equipment may be operated inside the SMZ above established roads on the side away from the stream whenever:

- An established road exists inside the SMZ and
- The toe of the fill nearest the stream is 25 feet or more from OHWM.

Locate designated skid trails approximately 200 feet apart.

Reclaim skid trails with erosion controls and vegetation.

Equipment Operation from Established Roads



NOTE: Any logs winched or cable-yarded across Class 1 or 2 stream segments must be fully suspended, unless otherwise authorized.

Clearecutting and Retention Trees in the SMZ

Clearecutting is prohibited in the SMZ.

In addition, a minimum number of “leave” or “retention” trees is required for each 100 linear feet of SMZ.

Tree Retention Requirements

The number of trees retained is based on:

- Stream segment class and
- The number of trees in the first 50-foot width of the SMZ, even when extended for slope; or
- The total number of trees in the SMZ segment when extended for wetlands.

The selection and distribution of retention trees are guided by the following.

For lakes and Class 1 and 2 streams

For SMZs extended for slope, select most retention trees within 50 feet of the stream. The remaining retention trees may be left anywhere in the SMZ segment.

Favor bank-edge trees. They protect and shade stream channels and banks.

Favor trees leaning toward the streams. They are likely to provide large woody debris to the stream channel.

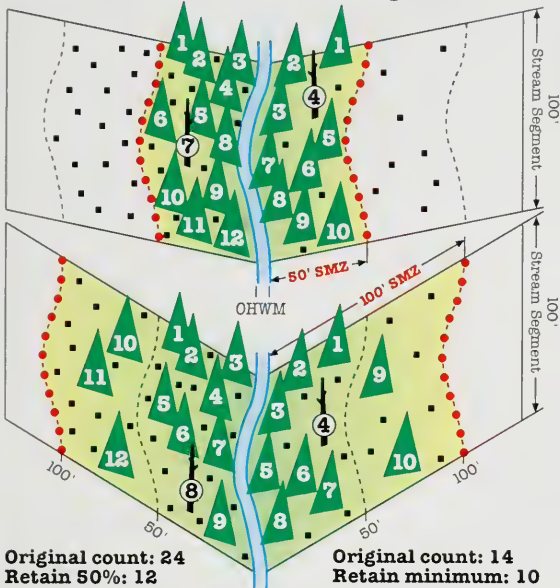
Maintain a diversity of tree species and size classes that are representative of the preharvest stand.

Protect and retain submerchantable trees and shrubs to the fullest extent possible.

Hardwoods and snags may be counted toward retention tree requirements in approximately the same proportion as in the preharvest stand.

Class 1 Stream

Retention per 100-foot stream segment



"Leave" trees and snags



Stumps of harvested trees

Class 1 streams and lakes

Retain at least 50% of the trees ≥ 8 inches DBH on each side of stream or 10 trees per 100-foot segment, whichever is greater.

Requirements common to Stream Classes 1 and 2

Leave species and sizes that represent the original stand.

Tree retention is based on the number of trees ≥ 8 inches DBH within the first 50-foot width of the SMZ.

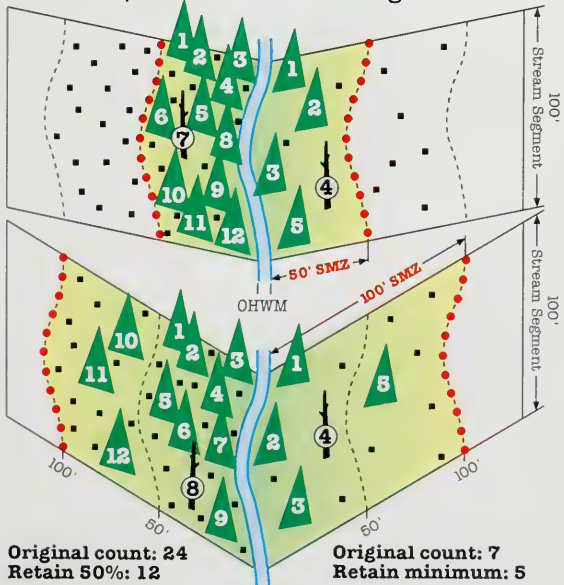
Protect and retain submerchantable trees and shrubs.

Class 2 streams

Retain at least 50% of the trees ≥ 8 inches DBH on each side of stream or 5 trees per 100-foot segment, whichever is greater.

Class 2 Stream

Retention per 100-foot stream segment



Class 3 Streams and OBW

Retention per 100-foot stream segment

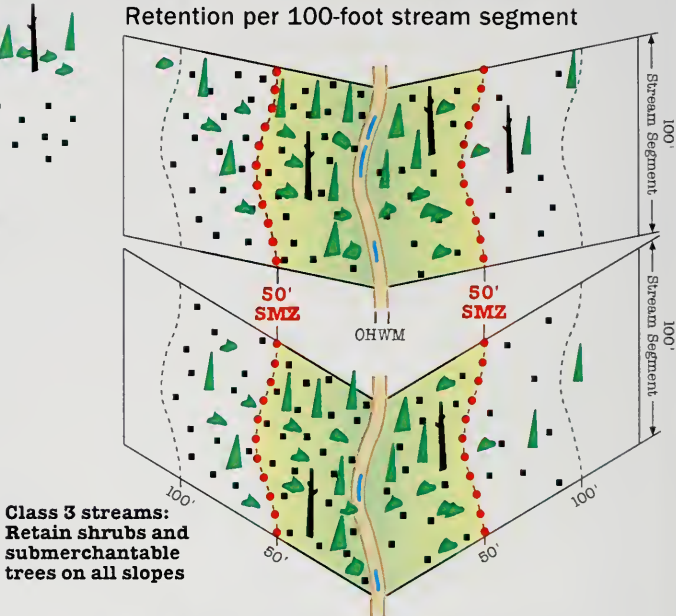
Shrubs, snags, and submerchantable trees

Stumps of harvested trees

Class 3 streams and other bodies of water

Protect and retain submerchantable trees and shrubs.

Snag retention is voluntary.



SMZ Extended for Wetlands

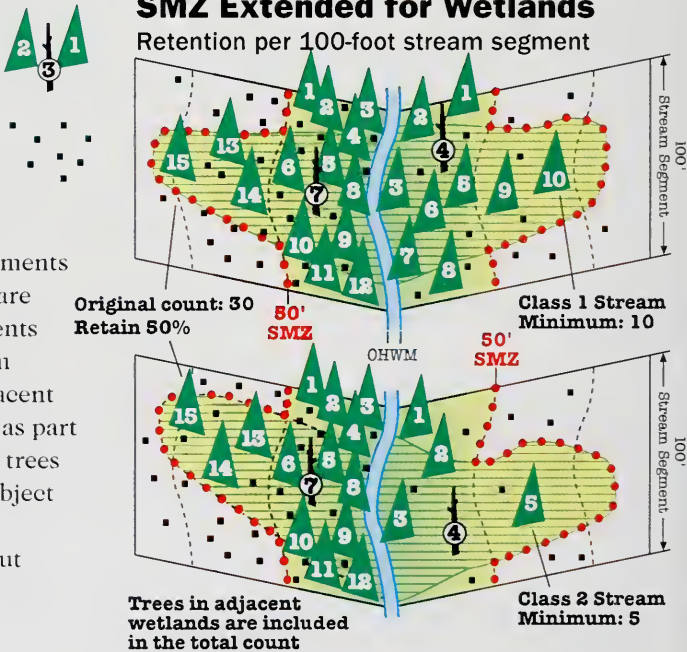
Retention per 100-foot stream segment

"Leave" trees and snags

Stumps of harvested trees

Adjacent wetlands

Retention tree requirements for adjacent wetlands are the same as requirements for the adjacent stream class. Trees in the adjacent wetlands are included as part of the total count, and trees ≥ 8 inches DBH are subject to the 50% minimum requirement throughout the adjacent wetlands.



"Leave" trees and snags
(Green is alive; orange is
dead or dying.)



Stumps of harvested trees



Salvage

The following applies only to trees meeting the definition of salvage under Rule 5.

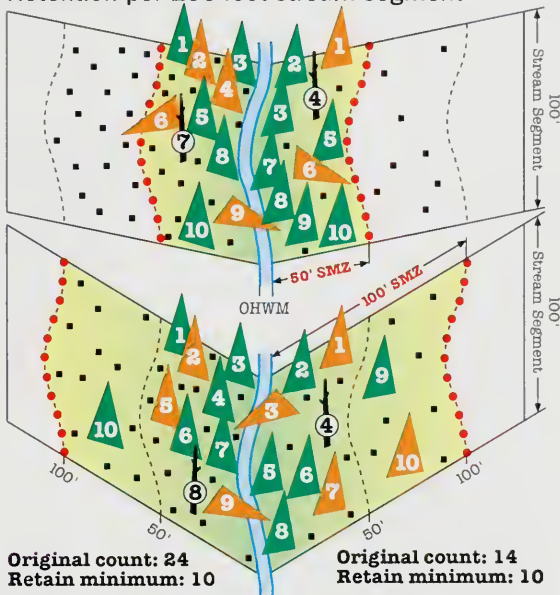
- On Class 1 streams, leave the 10-tree minimum per 100-foot segment.
- On Class 2 streams, leave the 5-tree minimum per 100-foot segment.
- If there are not enough standing live trees to meet the minimum number of leave trees, count the dead or down trees also.
- When there is a salvage operation, all trees that have fallen across or in streams must be retained, unless there is a DNRC site-specific alternative practice.

NOTE: Any forest practice that fails to meet the tree retention standards requires approval of a site-specific alternative practice.

For additional information on alternative practices, contact DNRC.

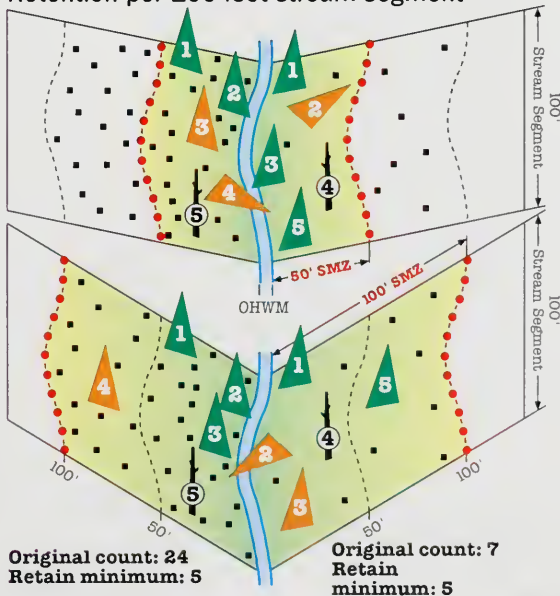
Salvage on Class 1 Stream

Retention per 100-foot stream segment



Salvage on Class 2 Stream

Retention per 100-foot stream segment



Road Construction

Road construction* in the SMZ is prohibited, except when necessary to cross a stream or wetland.

The SMZ law does not determine when "it is necessary to cross a stream." However, road building and equipment operation within the SMZ are restricted by the SMZ law and rules.

Fill must not be deposited in the SMZ, except as necessary to construct crossings.

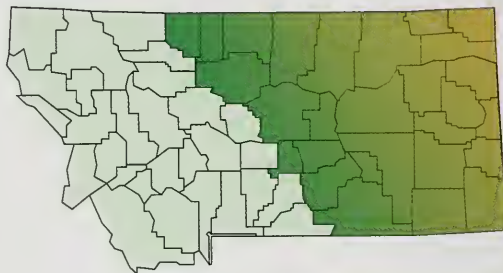
To construct a road across a perennial stream, a private operator needs a 310 permit, which is administered by conservation districts.

Construction of a skid trail across a perennial stream requires a 310 permit and an approved alternative practice from DNRC.

To construct a skid trail across a stream that is not covered under the 310 law, the operation must be conducted as a DNRC-approved alternative practice or a pre-approved alternative practice.

* This booklet refers only to the Montana SMZ law and rules. Other federal, state, or local laws may apply.

The Eastern Montana Exception



Eastern zone counties: Big Horn, Blaine, Carter, Chouteau, Custer, Daniels, Dawson, Fallon, Fergus, Garfield, Golden Valley, Hill, Liberty, McCone, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Roosevelt, Rosebud, Sheridan, Toole, Treasure, Valley, Wibaux, and Yellowstone.

Roads may be constructed inside the SMZ on class 3 stream segments only in the eastern zone wherever:

- The slope of the SMZ immediately adjacent to the stream is 10% or less for a distance of at least 25 feet from the ordinary high water mark, and
- There exists in the outer portion of the SMZ a hillside with slopes in excess of 35%.

The road must be constructed on the gentler slopes in such a manner that:

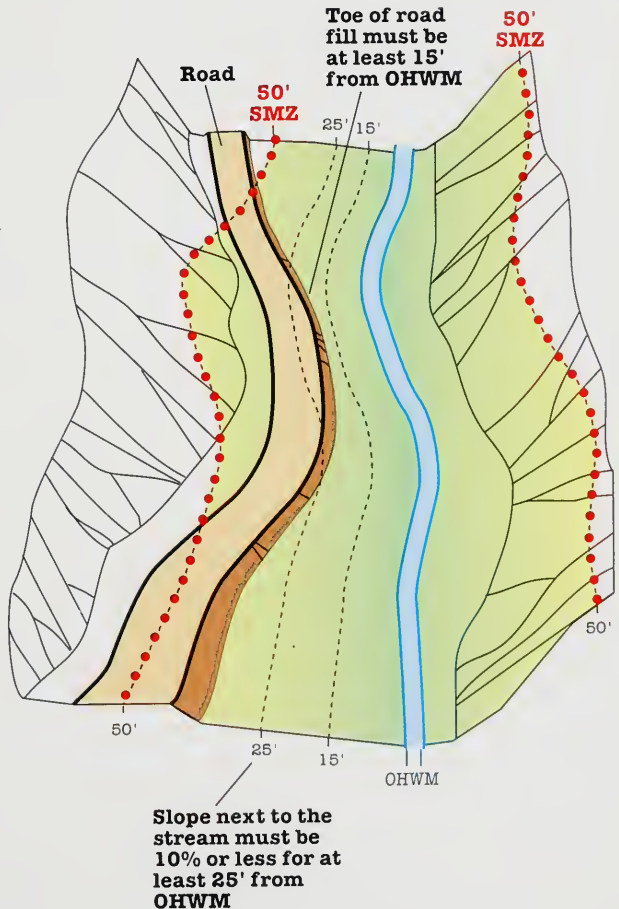
- Cutting and filling are minimized.

- The toe of the road fill is located at least 15 feet from the ordinary high water mark.
- The road is located as far away from the ordinary high water mark as is practical.
- Road drainage features are installed as needed to minimize sediment delivery to the stream.

If you have the option, locate roads outside the 50-foot SMZ.

Road Construction in Eastern Zone

Class 3 streams only



Hazardous or Toxic Materials

Hazardous materials are prohibited in the SMZ.

Any storage or handling of hazardous materials in the SMZ is prohibited.

Any application or spillage of hazardous materials that has or will enter a stream is a violation. (Spills must be cleaned up and disposed of in accordance with other applicable federal and state laws.)

To avoid accidental violations, it is recommended that refueling and fuel storage not be conducted inside the SMZ.

Use of waste oil on roads for dust abatement is prohibited within the SMZ because waste oil contains pollutants.

Herbicides, pesticides, and fertilizer are considered hazardous or toxic materials and must be applied in strict compliance with all label instructions and other laws.

Side-Casting of Road Material

The side-casting of road material (during maintenance and snow-plowing) into a stream, lake, wetland, or other body of water is prohibited in the SMZ.

Depositing Slash

Depositing slash into streams, lakes, or other bodies of water is prohibited.

Slash deposited between the ordinary high water marks of a stream, lake, or OBW would be considered a violation.

Depositing slash into a stream also violates the Montana Water Quality Act and may violate the Montana Natural Streambed and Land Preservation Act (310 Permit Program).

Trees felled in or across streams, lakes, or OBW may be considered a violation of this rule if left behind after forest practices. Removal requirements can be found in Rule 4.

DNRC strongly recommends that trees not be intentionally felled across a stream.

Alternative Practices

Alternative practices are the “exceptions to the rules.”

The seven forest practices prohibited within the SMZ may be permitted with an alternative practice. Approval for the practice must be obtained from DNRC before the practice begins. DNRC considers alternative practices on a case-by-case basis. Alternative practices are site-specific and can be approved only if the practice will maintain the integrity of the SMZ.

For more information on “alternative practices,” please consult the rules, or contact a DNRC service forester.

Voluntary Wildlife Guidelines

When the 1991 Montana Legislature passed the Steamside Management Zone (SMZ) Law, it also directed the Department of Natural Resources and Conservation (DNRC) to develop voluntary, non-enforceable guidelines for managing wildlife habitat in the SMZs.

Many wildlife species make extensive use of SMZs, even though SMZs comprise only a small portion of the overall landscape. Wildlife depend on SMZs for food, cover, travel corridors, and nesting areas. Many species also use SMZs during migration as resting and feeding areas.

The SMZ rules already provide for the maintenance of the forest structure and species diversity needed by most wildlife species. However, to enhance these habitat components, DNRC has developed voluntary wildlife guidelines.

Voluntary wildlife guidelines for streamside management zones are available from your local service forester. For more information, contact the Department of Natural Resources and Conservation.

SMZ Field Guide

Adapted from a field guide developed by Plum Creek Timber,
LP 1993

STREAM means “a natural water-course of perceptible extent that has a generally sandy or rocky bottom or definite banks and that confines and conducts continuously or intermittently flowing water.”

The SMZ law and rules apply only to drainages that meet the definition of a stream, lake, or OBW.

The following field guide is set up as a key. Each step has two (possibly three) choices, all numbered or lettered the same. At each step pick the choice that fits the best. The key will then suggest a conclusion or direct you to another step.

The 7 SMZ Prohibitions

1. Broadcast burning ... p. 8
2. Operation of equipment ... p. 9
3. Clearcutting ... p. 12
4. Road construction, except to cross a stream or wetland ... p. 16
5. Hazardous or toxic materials ... p. 18

6. Side-casting of road material into a stream, lake, wetland, or other body of water during road maintenance ... p. 18

7. Slash in streams, lakes, or other water bodies ... p. 19

Stream Segment Classes

1a. Stream segment supports fish.

☛ **Class 1**

1b. Does not support fish.

2a. Has surface flow six months or more.

3a. Contributes surface flow to stream, lake, or other body of water ☛ **Class 1**

3b. Does not contribute surface flow. ☛ **Class 2**

2b. Has surface flow less than six months.

4a. Contributes surface flow to stream, lake, or other body of water ☛ **Class 2**

4b. Rarely contributes surface flow ☛ **Class 3**

NOTE: This brief summary is not intended to replace the rules, but to serve as a reference for their broad points. The definitions and specific conditions detailed in the rules are essential for proper SMZ implementation.

*SMZ Field Guide, continued***SMZ Width**

1a. SMZ-slope is $\leq 35\%$, ➤ **50 feet** and extended for adjacent wetlands

1b. SMZ-slope $> 35\%$

2a. Class 3 stream segment, other body of water ➤ **50 feet** and extended for adjacent wetlands

2b. Class 1 or 2 stream segment, lake, or OBW

3a. Bench occurs between 50 and 100 feet ➤ **edge of bench**

3b. Road occurs between 50 and 100 feet ➤ **toe of road fill**

3c. No road, no bench ➤ **100 feet** and extended for adjacent wetlands

Tree Retention in SMZ

1. For Class 1 streams and lakes, ➤ at least 50% of trees ≥ 8 inches DBH must be retained on each side of stream or 10 trees per 100 feet, whichever is greater. Protect and retain shrubs and submerchantable trees.

2. For Class 2 streams, ➤ at least 50% of trees ≥ 8 inches DBH must be retained on each side of stream or 5 trees per 100 feet, whichever is greater. Protect and retain shrubs and submerchantable trees.

3. For Class 3 streams, lakes, and other bodies of water, ➤ shrubs and submerchantable trees must be protected and retained in the entire SMZ to the fullest extent possible.

Additional tree retention requirements

If the SMZ is extended for a wetland, then meet the tree retention requirements of the stream class for the entire SMZ.

If the SMZ is extended for slope, the tree retention requirements are based on the number of trees in the first 50 feet.

If the minimum number of trees ≥ 8 inches DBH are not present, ➤ then retain the minimum number of trees with the largest DBH available.

➤ Retain trees representative of the size and species of the preharvest stand.

Favor leaving bank-edge trees, those leaning toward the stream, and those that will fall into the stream.

Concentrate retained trees within 50 feet of the stream.

SMZ Rules

36.11.301

APPLICABILITY - DEFINITIONS - EFFECTIVE DATE
(IS HEREBY REPEALED) (History: 77-5-307, MCA;
IMP, 77-5-307, MCA; NEW, 1993 MAR p. 14, Eff.
3/15/93; TRANS, 1995 MAR p. 1958, Eff. 7/1/
95; REP, 1996 MAR p. 1865, Eff. 7/4/96.)

Rule 1: (36.11.311 and 36.11.312)

Applicability / Definitions

36.11.311 Applicability

(1) This subchapter applies to forest practices conducted within a timber sale in the streamside management zone. Such practices, as defined in 77-5-302(3), MCA, include the following activities when conducted within a "timber sale" defined in ARM 36.11.312:

- (a) the harvesting of trees;
- (b) road construction or reconstruction associated with harvesting and accessing trees;
- (c) site preparation for regeneration of a timber stand;
- (d) reforestation;
- (e) management of logging slash.
(History: 77-5-307, MCA; IMP, 77-5-302 and 77-5-307, MCA; NEW, 1997 MAR p. 1992, Eff. 11/4/97.)

36.11.312 Definitions

Wherever used in this subchapter, unless a different meaning clearly appears from the context:

(1) "Alternative practices" means forest practices conducted in the SMZ that are different from the practices required by the standards provided in 77-5-303,

MCA, and are approved by the department either by adoption of this subchapter or on a site-specific basis upon application of the operator.

(2) "Broadcast burning" means spreading fire through a continuous fuel cover. The fuels consist of slash resulting from forest practices, surface litter, and duff. Fuels are left in place, fairly uniform, and ignited under certain conditions with the intent to meet planned management objectives in the desired area.

(3) "Class 1 stream segment" means a portion of stream that supports fish; or a portion of stream that normally has surface flow during 5 6 months of the year or more; and that contributes surface flow to another stream, lake, or other body of water.

(4) "Class 2 stream segment" means a portion of stream that is not a class 1 or class 3 stream segment. Two common examples of class 2 stream segments are:

- (a) A portion of stream which does not support fish; normally has surface flow during less than 6 months of the year; and contributes surface flow to another stream, lake, or other body of water; or
- (b) A portion of stream that does not support fish; normally has surface flow during 6 months of the year or more; and does not contribute surface flow to another stream, lake, or other body of water.

(5) "Class 3 stream segment" means a portion of a stream that does not support fish; normally has surface flow during less than 6 months of the year; and

rarely contributes surface flow to another stream, lake or other body of water.

(6) "Clearcutting" means removal of virtually all the trees, large and small, in a stand in one cutting operation. Virtually all woody vegetation is removed from the site preparatory to establishment of new trees.

(7) "Construction" means cutting and filling of earthen material that results in a travel-way for wheeled vehicles.

(8) "Diameter at breast height" (abbreviated "dbh") means the diameter of a tree measured 4 1/2 feet from the ground level. Ground level is the highest point of the ground touching the stem.

(9) "Eastern zone" means the counties of Big Horn, Blaine, Carter, Choteau, Custer, Daniels, Dawson, Fallon, Fergus, Garfield, Golden Valley, Hill, Liberty, McCone, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Roosevelt, Rosebud, Sheridan, Toole, Treasure, Valley, Wibaux, and Yellowstone.

(10) "Established road" means an existing access or haul route for highway vehicles that is passable under one or more of the following circumstances:

- (a) without any work;
- (b) with clearing of windfall or small woody vegetation;
- (c) with surface blading;
- (d) with replacement of stream crossing structures and drainage structures that were removed to restrict access; or

(e) with removal of constructed access barriers.

(11) "Hazardous or toxic material" means substances which by their nature are dangerous to handle or dispose of, or are a potential environmental contaminant, and includes petroleum products, pesticides, herbicides, chemicals, and biological wastes.

(12) "Lake" means a body of water where the surface water is retained by either natural or artificial means, where the natural flow of water is substantially impeded, and which supports fish.

(13) "Ordinary high water mark" means the stage regularly reached by a body of water at the peak of fluctuation in its water level. The ordinary high water mark is generally observable as a clear, natural line impressed on the bank. It may be indicated by such characteristics as terracing, changes in soil characteristics, destruction of vegetation, presence or absence of litter or debris, or other similar characteristics.

(14) "Other body of water" means ponds and reservoirs greater than 1/10 acre that do not support fish; and irrigation and drainage systems discharging directly into a stream, lake, pond, reservoir or other surface water. Water bodies used solely for treating, transporting, or impounding pollutants shall not be considered surface water.

(15) "Road" means a travel-way suitable for highway vehicles.

(16) "Salvage" means harvesting trees that have been killed or damaged or are in imminent danger of being killed or

damaged by injurious agents other than competition between trees.

(17) "Sidecasting" means the act of moving excess earthen material over the side of a road during road maintenance operations.

(18) "Slash" means the woody debris that is dropped to the forest floor during forest practices. Timber slash consists of stems, branches, and twigs left behind after forest practices.

(19) "Slope distance" means the length of a line between two points on the land surface.

(20) "Stream," as defined at 77-5-302(7), MCA, means "a natural watercourse of perceptible extent that has a generally sandy or rocky bottom or definite banks and that confines and conducts continuously or intermittently flowing water."

(21) "Streamside management zone" or "zone" (abbreviated "SMZ"), as defined at 77-5-302(8), MCA, means "the stream, lake, or other body of water and an adjacent area of varying width where management practices that might affect wildlife habitat or water quality, fish, or other aquatic resources need to be modified. The streamside management zone encompasses a strip at least 50 feet wide on each side of a stream, lake, or other body of water, measured from the ordinary high water mark, and extends beyond the high water mark to include wetlands and areas that provide additional protection in zones with steep slopes or erosive soils."

(22) "Timber sale," as defined at 77-5-302(9), MCA, means "a series of forest

practices designed to access, harvest, or regenerate trees on a defined land area for commercial purposes."

(23) "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include marshes, swamps, bogs, and similar areas. (History: 77-5-307, MCA; IMP, 77-5-302 and 77-5-307, MCA; NEW, 1997 MAR p. 1992, Eff. 11/4/97.)

Rule 2: (36.11.302)

Width of SMZ / Marking Boundary

(1) The slope of the SMZ is measured perpendicular to the stream or lake from the ordinary high water mark to a point 50 feet slope distance from the ordinary high water mark.

(2) The SMZ width is 50 feet slope distance on each side of streams, lakes, and other bodies of water measured from the ordinary high water mark, in all cases except:

(a) Where wetlands exist adjacent to the stream, lake, or other body of water, the SMZ extends to include the wetlands;

(b) On Class 1 and 2 stream segments and lakes where the slope of the SMZ is greater than 35%, the SMZ width is 100 feet, except:

(i) where an established road exists between 50 and 100 feet from the ordinary high water mark, the SMZ boundary is located at the toe of the road fill; or

(ii) where the slope of the SMZ decreases to 15% or less to form a bench that is 50 to 100 feet from the ordinary high water mark and at least 30 feet wide, the SMZ boundary is located at the edge of the bench nearest the stream.

(3) where forest practices that are prohibited in the SMZ will be conducted adjacent to the SMZ boundary on a class 1 or class 2 stream segment, the SMZ boundary must be clearly marked prior to conducting such practices. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-301, 302(8), MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 3: (36.11.303)

Broadcast Burning

(1) Broadcast burning in the SMZ is prohibited unless approved by the department under a site-specific alternative practice. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 4: (36.11.304)

Equipment Operation in the SMZ

(1) Operation of wheeled or tracked equipment in the SMZ except on established roads is prohibited except as provided in this rule.

(2) In order to permit timber harvest on wetlands under conditions that protect the integrity of the SMZ, an operator may, as an alternative practice without site-specific approval, operate wheeled or tracked equipment from the outside

edge of an SMZ to within 50 feet of the ordinary high water mark wherever:

- (a) The SMZ extends beyond 50 feet from the ordinary high water mark to include adjacent wetlands;
- (b) There exist winter conditions with adequate snow or frozen ground; and
- (c) Operation of the wheeled or tracked equipment:
 - (i) Does not cause rutting or displacement of the soil;
 - (ii) Protects and retains shrubs and submerchantable trees to the fullest extent possible;
 - (iii) Does not remove stumps; and
 - (iv) Otherwise conserves the integrity of the SMZ.

(3) In order to minimize road construction and skid trails necessary for timber harvest on lands adjacent to the SMZ, an operator may, as an alternative practice without site-specific approval, cross the SMZ and the stream or other body of water with wheeled or tracked equipment on a class 3 stream segment or other body of water at locations spaced approximately 200 feet apart or more provided that:

- (a) Crossings are located in areas where the stream or other body of water is dry and the banks and bottoms are stable;
- (b) Excavation is minimized;
- (c) The capacity of the stream channel or other body of water is maintained; and

(d) The distance traveled through the SMZ is minimized.

(4) In order to minimize road construction necessary for timber harvest on lands adjacent to the SMZ, an operator may, as an alternative practice without site-specific approval, operate wheeled or tracked equipment inside the SMZ off of established roads on the side of the road away from the stream wherever:

(a) An established road exists inside the SMZ or construction of a road inside the SMZ is authorized under ARM 26.6.606 (See 36.11.306 for correct cross-reference);

(b) The toe of the road fill nearest the stream is at least 25 feet from the ordinary high water mark; and

(c) Operations are conducted in such a manner that:

(i) Wheeled or tracked equipment stays out of wetlands except under winter conditions as provided in (2) above;

(ii) All skidding of logs takes place on designated skid trails located approximately 200 feet apart or more;

(iii) all skid trails in such areas are reclaimed by installing erosion control measures and reestablishing vegetative cover;

(iv) drainage features are established or reestablished on all roads used under this section;

(v) logs are not decked on the side of the road toward the stream; and

(vi) no landings are constructed in the SMZ.

(5) When logs are being winched or cable yarded across a class 1 or 2 stream segment by equipment located outside the SMZ, logs must be fully suspended unless otherwise authorized pursuant to the Natural Streambed and Land Preservation Act of 1975, 75-7-101 et seq., MCA.

(6) The department may also approve operation of wheeled or tracked equipment in the SMZ as a site-specific alternative practice only under conditions that:

(a) Conserve the integrity of the SMZ;

(b) Do not cause rutting of the soil; and

(c) Protect the residual stand of shrubs and trees. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-301, 303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 5: (36.11.305)

Retention of Trees in the SMZ/ Clearcutting

(1) The forest practice of clearcutting is prohibited in the SMZ unless approved by the department under a site-specific alternative practice.

(2) Further, in order to provide large woody debris, stream shading, water filtering effects, and to protect stream channels and banks, merchantable and submerchantable trees must be retained in the first 50 feet of the SMZ beyond the

ordinary high water mark and in the entire SMZ where the SMZ is extended for wetlands under ARM 26.6.302(2)(a), (See 36.11.302(2)(a) for correct cross reference) on each side of streams, and along lakes and other bodies of water as follows:

(a) On each side of class 1 stream segments and lakes retain 50% of the trees greater than or equal to 8 inches dbh, or 10 trees greater than or equal to 8 inches dbh in each 100 lineal feet of the SMZ, whichever is greater.

(i) If less than 10 trees greater than or equal to 8 inches dbh are present in any 100 lineal foot segment of the SMZ, then a minimum of 10 trees of the largest diameter available must be retained in that segment.

(ii) Trees retained must be representative of the species and size of trees in the pre-harvest stand.

(iii) Shrubs and submerchantable trees must be protected and retained in the entire SMZ to the fullest extent possible when conducting forest practices in the SMZ.

(b) On each side of class 2 stream segments retain 50% of the trees greater than or equal to 8 inches dbh, or 5 trees greater than or equal to 8 inches dbh in each 100 lineal feet of the SMZ, whichever is greater.

(i) If less than 5 trees greater than or equal to 8 inches dbh are present in any 100 lineal foot segment of the SMZ, then a

minimum of 5 trees of the largest diameter available must be retained in that segment.

(ii) Trees retained must be representative of the species and size of trees in the pre-harvest stand.

(iii) Shrubs and submerchantable trees must be protected and retained in the entire SMZ to the fullest extent possible when conducting forest practices in the SMZ.

(c) On each side of class 3 stream segments and other bodies of water, shrubs and submerchantable trees must be protected and retained in entire SMZ to the fullest extent possible when conducting forest practices in the SMZ.

(3) Hardwood trees and snags meeting diameter standards of (2) above may be counted toward retention tree requirements in the same approximate proportion as their occurrence in the stand prior to commencement of forest practices.

(4) Trees retained pursuant to this rule must be distributed within the SMZ as guided by the following criteria:

(a) Favor bank-edge trees;

(b) Favor trees leaning toward the stream and those that cannot be felled without falling into the stream;

(c) Where the SMZ is greater than 50 feet wide and harvesting will result in the minimum stocking of trees required to be retained under section (2)(a) and (b), concentrated retained trees within 50 feet of the stream.

(5) Trees retained pursuant to this rule may be salvaged only under the following conditions:

(a) Trees to be harvested meet the definition of salvage at ARM 26.6.601(2)(p), (See 36.11.312(16) for correct cross reference); and

(b) The minimum tree retention requirements of section (2) are met by standing live trees, or by dead or fallen trees where sufficient standing live trees are not available; and

(c) All trees that have fallen across or in the stream must be retained, unless salvage of such trees is approved as a site-specific alternative practice subject to other federal and state laws and regulations.

(6) All practices which deviate from the tree-distribution criteria provided in (2) and (4) above require approval as site-specific alternative practices. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-301, 303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 6: (36.11.306)

Road Construction in the SMZ

(1) The construction of roads in the SMZ is prohibited except when necessary to cross a stream or wetland unless approved by the department under a site-specific alternative practice or as provided in this rule. The construction of roads across streams, wetlands or other bodies of water is not regulated by these rules but may be subject to other state and federal laws and regulations.

(2) Road fill material must not be deposited into the SMZ except as needed to construct crossings.

(3) In order to minimize excavation for road construction on erosive soils characteristic of Eastern Montana, an operator may, as an alternative practice without site-specific approval, construct or locate a road inside the SMZ on class 3 stream segments in the eastern zone only wherever:

(a) The slope of the SMZ immediately adjacent to the stream is 10% or less for a distance of at least 25 feet from the ordinary high water mark;

(b) There exists in the outer portion of the SMZ a hillside with slopes in excess of 35%; and

(c) The road is constructed or located on the gentler slopes in such a manner that:

(i) Cutting and filling of earthen material is minimized;

(ii) The toe of the road fill is located at least 15 feet from the ordinary high water mark;

(iii) The road is located as far away from the ordinary high water mark as is practical; and

(iv) Road drainage features are installed as needed to minimize sediment delivery to streams.

(History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-301, 303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 7: (36.11.307)**Hazardous or Toxic Materials**

- (1) The handling, storage, application, or disposal of hazardous or toxic materials in the SMZ in a manner that pollutes streams, lakes, or wetlands or that may cause damage or injury to humans, land, animals, or plants is prohibited.
- (2) Any application of herbicides or pesticides must be done in a manner that such materials are not introduced to streams, lakes, wetlands, or other bodies of water through surface runoff or subsurface flow.
- (3) Any application of herbicides or pesticides must be done in a manner which does not destroy vegetation in the SMZ to an extent which impairs the capacity of the SMZ to provide shade or to act as an effective sediment filter.
- (4) Any application of herbicides or pesticides in the SMZ must be in accordance with all label directions and in compliance with all applicable laws and regulations regarding the use of such material.
- (5) Dust abatement agents which do not contain waste oil may be applied on roads in the SMZ provided that such material is not directly introduced into a stream, lake, or other body of water. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 8: (36.11.308)**Side-casting of Road Material**

- (1) The side-casting of road material into a stream, lake, wetland, or other body of water during road maintenance operations is prohibited in the SMZ. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 9: (36.11.309)**Depositing Slash**

- (1) Depositing slash in streams, lakes, or other bodies of water is prohibited unless approved by the department under a site-specific alternative practice subject to other state and federal laws and regulations. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-303, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

Rule 10: (36.11.310)**Site-specific Alternative Practices**

- (1) The owner or operator shall comply with the management standards stated in 77-5-303(1), MCA, and this subchapter, unless approval has been obtained from the department for alternative practices designed for site-specific conditions encountered during a timber sale prior to conducting such practices.
- (2) The department may approve a proposed alternative practice only if such practice would be otherwise lawful and the department determines with reasonable certainty that the proposed

alternative practice would conserve the integrity of the streamside management zone and would not significantly diminish the function of the zone as state in 77-5-301, MCA:

- (a) To act as an effective sediment filter to maintain water quality;
- (b) To provide shade to regulate stream temperature;
- (c) To support diverse and productive aquatic and terrestrial riparian habitats;
- (d) To protect stream channel and banks;
- (e) To provide large, woody debris that is eventually recruited into a stream to maintain riffles, pools, and other elements of channel structure; and
- (f) To promote floodplain stability.

(3) In order to obtain department approval of alternative practices, the owner or operator shall submit to the department an application describing the proposed practices and location. Applications must provide all data specified by the department and must be submitted on forms provided or approved by the department.

(4) Within 10 working days of receipt of the application for approval of alternative practices the department shall determine if the application is approved, approved with modification, disapproved, incomplete, requires additional information or environmental analysis, or requires a field review. The department shall notify the owner and the applicant of its decision in writing.

(5) If the department determines a field review is necessary, the field review must be made at a mutually agreeable time. The owner or his designee must be present at the field review.

(6) Within 10 working days after all necessary field review is complete, the department shall determine whether the application is approved, approved with modification, disapproved, incomplete, or requires additional information or environmental analysis. The department shall notify the owner and the applicant of its decision in writing.

(7) The department may notify the applicant in writing that it declines to conduct further environmental analysis of an application if it determines that the proposed alternative practices are complex, or affect an environmentally sensitive area, or involve a high degree of uncertainty that the proposed alternative practices will have a significant impact on the quality of the human environment. The notice must briefly describe the department's reasons for declining to conduct further analysis. In this case, the applicant may conduct further environmental analysis and submit documentation to the department. The department shall independently review any further environmental analysis and documentation of the proposed alternative practices provided by the applicant and may adopt such documentation if it is adequate under the Montana Environmental Policy Act (75-1-101 et seq., MCA), and rules adopted thereunder ARM 26.2.628-663 (See 36.11.512-543 for correct cross reference). If so adopted, the department

may utilize such environmental documentation in further consideration of the application for alternative practices.

(8) In the event the department determines that an application for alternative practices may be of significant interest to the public, the time provided in this rule for considering such application may be extended in order to allow time for the public to be notified and participate in the department's decision pursuant to 2-3-101 et seq., MCA, and ARM 26.2.701-707 (See 36.2.701 for correct cross reference).

(9) Persons applying for approval of alternative practices shall agree in writing that approved alternative practices, including any additional conditions imposed by the department, shall have the same force and authority as the standards contained in 77-5-303, MCA, and shall be enforceable by the department under 77-5-303, MCA, to the same extent as such standards. Persons responsible for conducting alternative practices shall comply with all conditions of such practices. In determining whether to approve applications for alternative practices, the department may consider past violations of such standards or of the requirements of previously approved alternative practices by the applicant.

(10) Authorization to conduct alternative practices is valid for 2 years from the date of approval or for such period as may be specified by the department. (History: Sec. 77-5-307, MCA; IMP, Sec. 77-5-302, 307, MCA; NEW, 1993 MAR p. 14, Eff. 3/15/93.; TRANS, 1995 MAR p. 1958, Eff. 7/1/95.)

NOTE: Due to an editing error when rule numbers were changed, cross-references are incorrect. The correct cross-reference follows the incorrect in parentheses.

About this publication

Developed in cooperation with

Montana Department of Natural Resources
and Conservation, Service Forestry
Bureau
Montana Department of Environmental
Quality
Montana Logging Association
Montana Wood Products Association
Plum Creek Timber, LP
USDA Forest Service
USDA Bureau of Land Management

Originally compiled and edited by

Norman Fortunate, then Forest Practices
Specialist, Montana Department of Natural
Resources and Conservation

Illustrated by

Kirk Johnson Design, Missoula

Special thanks to

Gordon Sanders, Montana Wood Products
Association

Cooperative funding provided by

U.S. Environmental Protection Agency
Montana Department of Natural Resources
and Conservation
Montana Logging Association
Plum Creek Timber, LP
USDA Forest Service
USDA Natural Resources Conservation
Service

For more information, contact

Montana Department of Natural Resources
and Conservation
2705 Spurgin Road
Missoula, Montana 59804-3199
(406) 542-4300

... or your local Montana Department
of Natural Resources and Conservation
field office.

You may reproduce or copy any portion
of this booklet by notifying the Montana
Department of Natural Resources and
Conservation. Please acknowledge this
publication as the source.

Persons with disabilities who need an
alternative, accessible format of this
document should contact DNRC at the
address and phone number on this page.

2,500 copies of this public document were
published with private and public funds at an
estimated cost of \$1.26 per copy, for a total
cost of \$3,155.00 which includes \$3,155.00
for printing and \$00 for distribution.

Reprinted August 2002

For more information, contact:

Or contact:

MONTANA DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
2705 SPURGIN ROAD
MISSOULA, MONTANA 59804-3199
(406) 542-4300

